

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1–13 (cancelled)

Claim 14 (currently amended): A method of identifying a protein which interacts with a specific binding partner, which method comprises

(a) providing a set of libraries of proteins, wherein each library of said set of libraries comprises a mixture of proteins encoded by a single randomized DNA sequence and wherein said ~~which~~ proteins are capable of specific binding interactions with a specified binding partner by amino acid residues at at least one specified position including a first specified position and at least one other specified position, which set of libraries comprises:

(i) 6 to 20 libraries in which each library has at least one but less than 20 amino acid residues at said first specified position and is randomized at said at least one other specified position, the arrangement being such that interaction of the 6 to 20 libraries with a specific binding partner identifies an amino acid residue at said first specified position that takes part in the specific binding interaction, and

- (ii) 6 to 20 libraries in each of which libraries said first specified position is randomized and a different ~~at least one but less than 20~~ amino acid ~~residues~~ is present at said at least one other specified position,
- (b) incubating the specific binding partner with each library of the set,
- (c) observing specific binding interactions with certain libraries of the set, and
- (d) using the observations to identify a protein which interacts with the specific binding partner.

Claim 15 (original): The method as claimed in claim 14, wherein the specific binding partner is a polynucleotide.

Claim 16 (original): The method as claimed in claim 14, wherein the specific binding interactions are observed by radiometric or luminescent assay.

Claim 17 (original): The method as claimed in claim 14, wherein the specific binding interactions are observed by imaging means.

Claim 18 (original): The method as claimed in claim 14, wherein the specific binding interactions are observed by scintillation proximity assay.

Claim 19 (previously presented): The method as claimed in claim 18, wherein the set of libraries of proteins are immobilized on scintillation proximity assay surfaces and the specific binding partner is radiolabelled.

Claim 20 (previously presented): The method of claim 18, wherein after incubation the scintillation proximity assay surfaces are washed to distinguish stronger specific binding interactions from weaker ones.

Claim 21-28 (cancelled)